

What is claimed is:

1. A mask fabrication method comprising the steps of:

(a) preparing a mask substrate;

(b) depositing, on said mask substrate, a light-shielding film with light-shielding characteristics with respect to exposure light for an exposure process using a mask;

(c) forming a light-shielding pattern by patterning said light-shielding film;

(d) mounting a pellicle on said mask substrate after forming said light-shielding pattern;

(e) inspecting the mask substrate with said light-shielding pattern; and

(f) repairing defect of said mask substrate in accordance with inspection results with said pellicle being mounted.

2. The mask fabrication method according to claim 1, wherein said light-shielding pattern is an organic film.

3. The mask fabrication method according to claim 2, wherein said organic film is a resist film.

4. The mask fabrication method according to claim 1, wherein said light-shielding pattern includes a metal film.

5. The mask fabrication method according to claim 1, wherein a process for repairing said defect is carried out by irradiating a laser beam to said defect with said

pellicle being mounted.

6. The mask fabrication method according to claim 5, wherein the wavelength of said laser beam is close to that of exposure light at the time of said exposure process.

7. The mask fabrication method according to claim 1, wherein a process for repairing said defect is carried out in such a state that an atmosphere surrounded by said pellicle and said mask substrate is set to be an atmosphere of a gas other than ambient air.

8. A mask fabrication method comprising the steps of:

(a) preparing a mask substrate;

(b) depositing, on said mask substrate, a resist film with light-shielding characteristics with respect to exposure light for an exposure process using a mask;

(c) forming a light-shielding pattern by patterning said resist film;

(d) mounting a pellicle on said mask substrate after forming said light-shielding pattern;

(e) inspecting the mask substrate with said light-shielding pattern; and

(f) repairing defect of said mask substrate in accordance with inspection results with said pellicle being mounted.

9. The mask fabrication method according to claim 8, wherein said defect is made from said resist film.

10. The mask fabrication method according to claim 9, wherein a process for repairing said defect is carried

out by irradiating a laser beam to said defect with said pellicle being mounted.

11. The mask fabrication method according to claim 8, wherein a process for repairing said defect is carried out in such a state that an atmosphere surrounded by said pellicle and said mask substrate is set to be an atmosphere of a gas other than ambient air.

12. A mask fabrication method comprising the steps of:

(a) preparing a mask substrate;

(b) depositing, on said mask substrate, a metal film with light-shielding characteristics with respect to exposure light for an exposure process using a mask;

(c) forming a first light-shielding pattern by patterning said metal film;

(d) depositing, on the mask substrate on which said first light-shielding pattern is formed, a resist film with light-shielding characteristics with respect to exposure light for an exposure process using a mask;

(e) forming a second light-shielding pattern by patterning said resist film;

(f) mounting a pellicle on said mask substrate after forming said first and second light-shielding patterns;

(g) inspecting the mask substrate with said first and second light-shielding patterns; and

(h) removing defect made from said resist film of said mask substrate in accordance with inspection results with said pellicle being mounted.

13. The mask fabrication method according to claim 12, wherein defect made from said resist film located in the vicinity of said first light-shielding pattern or being in contact with said first light-shielding pattern is selectively removed in a process for repairing said defect.

14. The mask fabrication method according to claim 12, wherein a process for repairing said defect is carried out by irradiating a laser beam to said defect with said pellicle being mounted.

15. The mask fabrication method according to claim 14, wherein the wavelength of said laser beam is close to that of exposure light at the time of said exposure process.

16. The mask fabrication method according to claim 12, wherein a process for repairing said defect is carried out in such a state that an atmosphere surrounded by said pellicle and said mask substrate is set to be an atmosphere of a gas other than ambient air.

17. A fabrication method of semiconductor integrated circuit device, comprising the steps of:

- (a) preparing a mask substrate;
- (b) depositing, on said mask substrate, a light-shielding film with light-shielding characteristics with respect to exposure light for an exposure process using a mask;
- (c) forming a light-shielding pattern by patterning said light-shielding film;
- (d) mounting a pellicle on said mask substrate after

forming said light-shielding pattern;

(e) inspecting the mask substrate with said light-shielding pattern;

(f) repairing defect of said mask substrate with the pellicle being mounted in accordance with inspection results, and fabricating a mask;

(g) preparing a wafer;

(h) depositing a resist film on a main surface of said wafer; and

(i) transferring a desired pattern onto said resist film by an exposure process using said mask.

18. The fabrication method of semiconductor integrated circuit device according to claim 17,

wherein said light-shielding pattern is an organic film.

19. The fabrication method of semiconductor integrated circuit device according to claim 18,

wherein said organic film is a resist film.

20. The fabrication method of semiconductor integrated circuit device according to claim 17,

wherein said light-shielding pattern contain a metal film.

21. The fabrication method of semiconductor integrated circuit device according to claim 17,

wherein a process for repairing said defect is carried out by irradiating a laser beam to said defect with the pellicle being mounted.